TVAC80020B

User guide

Version 08/2012

Original user guide in English.
Retain for future reference!

Introduction

Dear customer,

Thank you for purchasing this product.

This product complies with current domestic and European regulations. Conformity has been verified, and all related certifications and documents are available from the manufacturer on request (www.abus-sc.com).

To ensure this condition is maintained and that safe operation is guaranteed, it is your obligation to observe these operating instructions!

Read the entire user guide carefully before starting operation of the product, and pay attention to all operating instructions and safety information!

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In the event of questions, please contact your local maintenance specialist or dealer.

⚠️

Warning as required by §201 StGB (German Criminal Code):

Whosoever unlawfully makes an audio recording of the privately spoken words of another; or uses, or makes a recording thus produced accessible to a third party, shall be liable to imprisonment or a fine.

Whosoever unlawfully overhears with an eavesdropping device the privately spoken words of another not intended for his attention; or publicly communicates, verbatim or the essential content of, the privately spoken words of another, recorded or overheard, shall incur the same penalty.

⚠️

Disclaimer

This user guide has been produced with the greatest of care. Should you discover any missing information or inaccuracies, please contact us under the address shown on the back of the manual.
ABUS Security-Center GmbH does not accept any liability for technical and typographical errors, and reserves the right to make changes to the product and user guide at any time and without prior warning.
ABUS Security-Center GmbH is not liable or responsible for direct or indirect damage resulting from the equipment, performance and use of this product. No forms of guarantee are accepted for the contents of this document.

Explanation of symbols

⚡	**The triangular high voltage symbol is used to warn of the risk of injury or health hazards (e.g. caused by electric shock).**
⚠	**The triangular warning symbol indicates important notes in these operating instructions which must be observed.**
ℹ	**This symbol indicates special tips and notes on the operation of the unit.**

Important safety information

⚡	**All guarantee claims are invalid in the event of damage caused by non-compliance with this user guide. We cannot be held liable for resulting damages.**
⚠	**In the event of material or personal damage caused by improper operation or non-compliance with the safety information, we cannot be held liable. All guarantee claims are voided in such cases.**

This device has been manufactured in accordance with international safety standards.
Please read the following safety instructions carefully.

Safety information

1. Power supply
    100 - 240 V AC voltage, 50 - 60 Hz (using a power supply unit for 5 V DC)
    Only operate this device using a power source which supplies the grid voltage specified on the type plate. If you are unsure which voltage is supplied at the installation location, contact your power supply company. Disconnect the device from the power supply before carrying out maintenance or installation work.

2. Overloading
    Avoid overloading electrical sockets, extension cables and adapters, as this can result in fires or electric shocks.

3. Liquids
    Make sure that no liquids of any type are able to enter the device.

4. Cleaning
    Only use a damp cloth to clean the device. Do not use corrosive cleaning materials.
    Disconnect the device from the power supply while doing so.

5. Accessories
    Only connect devices that are suitable for the intended purpose. Otherwise, hazardous situations or damage to the device can occur.

6. Installation position
    This device is suitable both for operation in protected outdoor areas as well as indoors. The product may be damaged if it is dropped, even from a low height.
    Install the device so that no direct sunlight can shine on the image sensor. Pay attention to the installation instructions in the corresponding section of this user guide.
    Never place the device close to heaters, stoves, other sources of heat, or in direct sunlight.
    Only operate the device at locations where temperatures within the permitted ambient temperature range of -10 °C to 50 °C prevail.

7. Wireless transmission
    The wireless range depends on a variety of environmental factors. The local conditions at the installation site may have a negative impact on the range. When there are no obstructions between the receiver and transmitter, a range of up to 150m is possible, but this range will be considerably less within buildings. The following environmental conditions compromise both the range as well as the frame rate:
    Mobile communication masts, high-tension pylons, electrical wires, ceilings and walls, devices with the same or an adjacent wireless frequency.

Warnings

Observe all safety and operating instructions before putting the device into operation for the first time.

1. Observe the following information to avoid damage to the mains cable and plug:
    - Do not modify or manipulate the power cable or plug.
    - Do not pull the cable when disconnecting the device from the mains power – always hold of the plug.
    - Ensure that the mains cable is positioned as far away as possible from any heating equipment, as this could otherwise melt the plastic coating.
    - The power supply unit for the door station must be protected from damp and moisture.

2. Follow these instructions. Non-compliance with these instructions could lead to an electric shock.

    1. Never open the housing or power supply unit.
    2. Do not insert any metallic or flammable objects into the device.
    3. Use overvoltage protection to prevent damage caused by overvoltage (e.g. electrical storms).

3. Disconnect defective devices from the power immediately and contact your specialist dealer.

⚡	When installing the device in an existing video surveillance system, ensure that all devices have been disconnected from the power supply and low-voltage circuit.
⚠	If in doubt, have a specialist technician carry out assembly, installation, and connection of the device. Improper or unprofessional work on the power supply or domestic installation puts both you and other persons at risk. Connect the installations so that the power supply circuit and low-voltage circuit always run separately from each other. They should not be connected at any point or be able to become connected as a result of a malfunction.

Avoid the following adverse conditions during operation:

- Moisture or excess humidity
- Extreme heat or cold
- Direct sunlight
- Dust or flammable gases, vapors, or solvents
- Strong vibrations
- Strong magnetic fields (e.g. next to machines or loudspeakers)
- The camera for the door station must not be directed toward the sun, as otherwise the sensor may be destroyed.
- The door station must not be installed on unstable surfaces

Unpacking the device

Handle the device with extreme care when unpacking it.

| ⚠	If the original packaging has been damaged, inspect the device. If the device shows signs of damage, return it in the original packaging and inform the delivery service.

Contents

1. Intended use

Digital wireless video intercom system, comprised of a weatherproof housing and a 3.5" LCD monitor, each with a hands-free speaker and power supply unit. You can install the system next to your door bell and connect it to your door opener. The compact 3.5" LCD color monitor is portable, meaning you do not have to walk to the intercom. The integrated microphone makes speaking to the visitor outside more convenient, and the door opener can be operated from the monitor. The digital transmission technology ensures interference-free reception. After the door bell has been pressed, images are recorded on an SD card (not included).

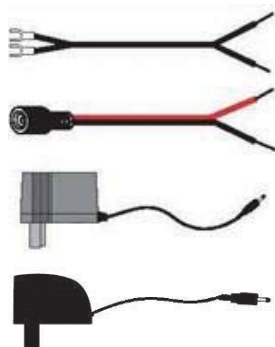For a detailed description of functions, refer to Section 3, "Features and functions"

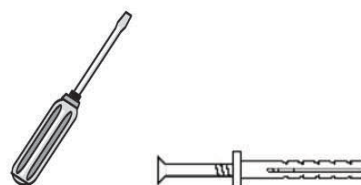## 2. Scope of delivery
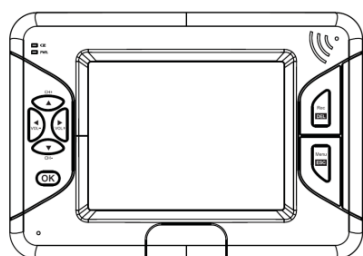
3.5" LCD monitor
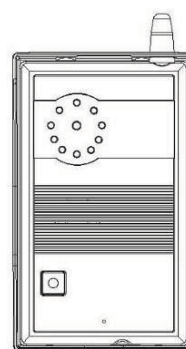
Digital door station in weatherproof housing

Power supply components

Accessories

3. Features and functions

- Intercom with an integrated camera and a portable 3.5" LCD color monitor thanks to its integrated battery
- An existing bell - buzzer wire is easy to connect to the door station
- Encrypted signal transmission between the door station and monitor
- The door can be opened by pressing a button on the monitor
- After pressing the door bell, images are recorded on an SD card in the monitor and can be watched conveniently on the PC
- Integrated microphone on the monitor allows speaking to the person outside
- Door station for a sheltered outdoor area (protection class IP55)
- Door station with batteries for use in the event of a power failure
- Day/night camera with integrated IR LEDs

4. Device description
4.1 Guide to the front of the monitor
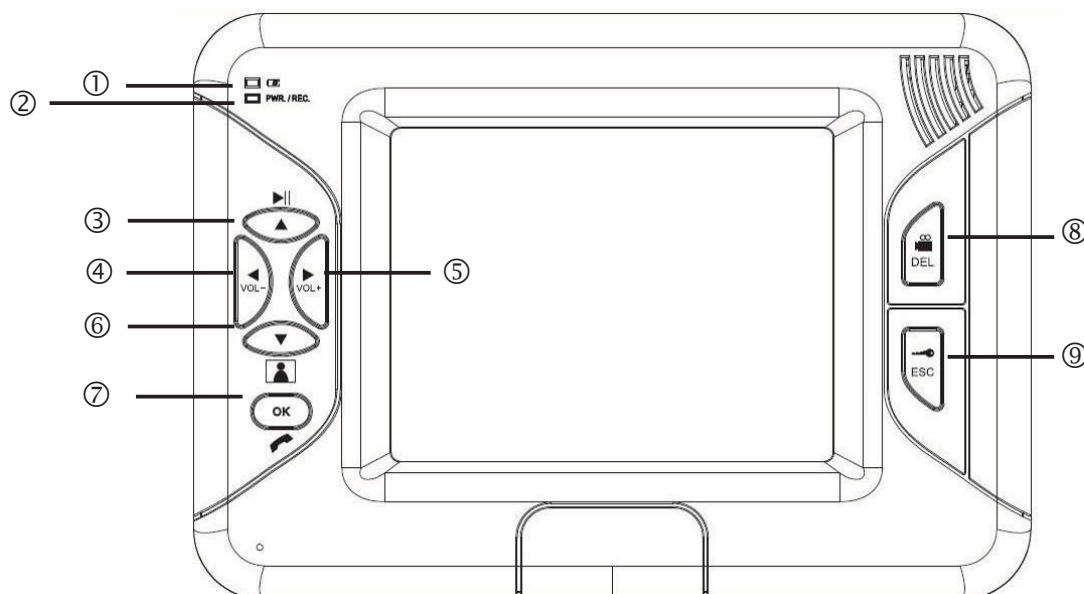
|			
①	Battery status display	Display of the current charge level:	
		Red:	Battery low
		Green:	Charging
		Off:	Battery fully charged
②	PWR / REC	Device status display	
		Blue:	Switch device on
		Off:	Switch device off
		Flashes 3x per sec.:	Device recording
		Flashes 1x per sec.:	New recording in memory
③	▶ǀǀ ▲	Live cast:	Click to access event list directly
		In the menu:	Navigate between menu items
④	◀ Vol-	Live cast:	Reduce volume
		In the menu:	Navigate between menu items
⑤	▶ Vol+	Live cast:	Increase volume
		In the menu:	Navigate between menu items
⑥	▼ 👤	Standby:	Switch on monitor
		Live cast:	Switch off monitor
		In the menu:	Navigate between menu items
⑦	OK-Taste	Live cast:	Speech function
		In the menu	Confirm the settings and changes
⑧	🎥 / Del	Live cast:	Start/stop the recording
		In the menu:	Delete the recording
			Only possible with an SD card!
⑨	🗝 / ESC	Live cast:	Door opener
		In the menu:	Quit the sub-menu
			The system will quit the menu automatically after one minute of inactivity

4.2 Guide to the rear of the monitor
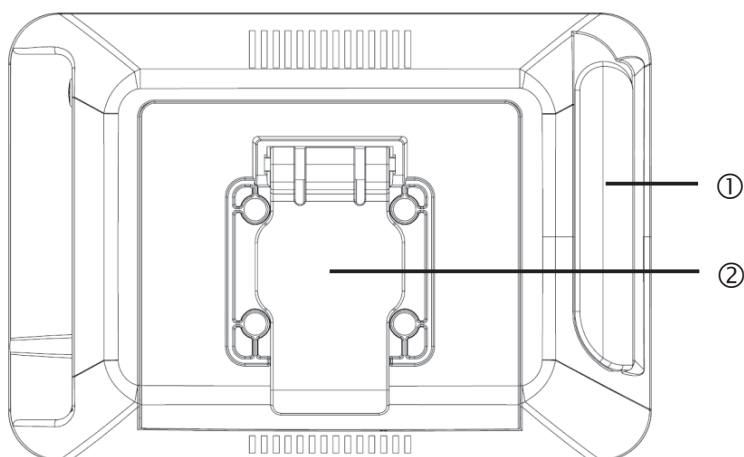
①	Antenna
②	Stand

4.3 Guide to the connections on the monitor
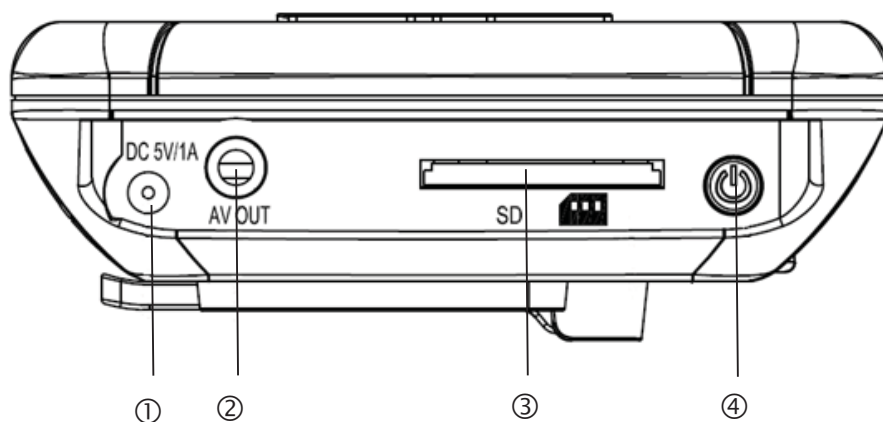
①	Power supply	5 VDC / 1 A (DC, 14.5 x 4.8 mm)
②	AV output	Output for displaying the screen image on a different device using an RCA cable (not included)
③	SD card slot	Slot for using an SD card with a max. capacity of 32 GB
④	Power button and menu button	Switch monitor on or off Live cast: Open / exit the menu

4.4 Guide to the door station
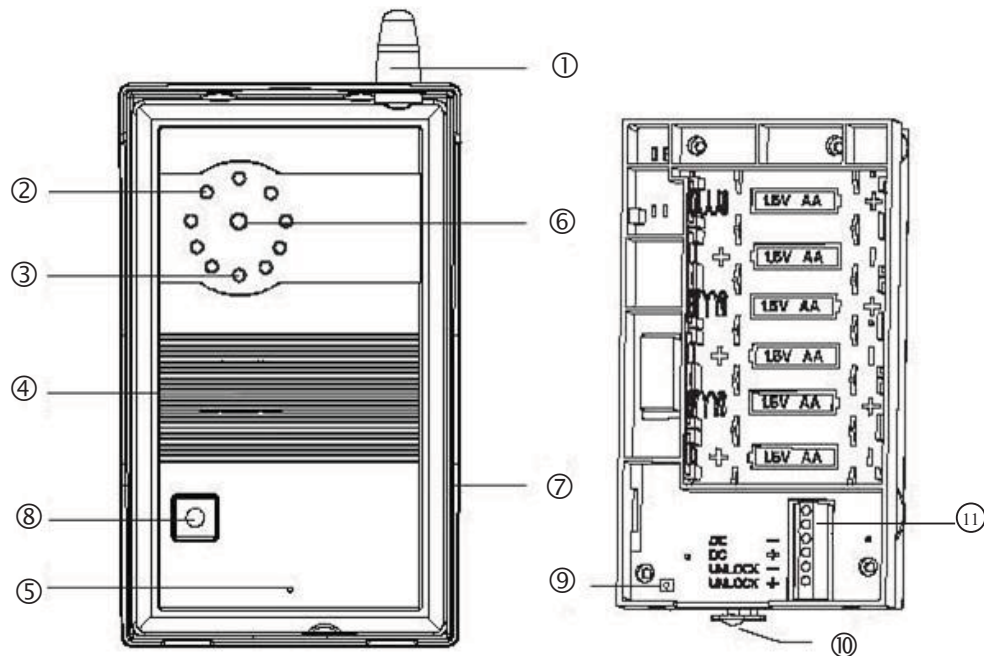
①	Antenna	
②	Infrared LED	
③	Photo sensor	
④	Loudspeaker	
⑤	Microphone	
⑥	Lens	
⑦	Housing for attachment	
⑧	Bell button	When the bell button is pressed, the monitor is activated.
⑨	Pairing button	To connect the door station to the monitor, the pairing button must be pressed. More information can be found under point 5.3.
⑩	Reset button	Reset button to restart the door station
⑪	Terminal block	○ Connection for bell ○ DC- ○ Power supply DC+ ○ UNLOCK- ○ Connection for door opener UNLOCK+ ○

4.5 Guide to the cable connections

Cable lug with connecting cable for the door opener

①	Cable lug contacts	For connection to a door opener already installed
②	Stripped cable ends	For connection to the terminal block in the door station

Round socket with connecting cable for power supply unit

①	Round socket	Connected to the connecting cable for the power supply unit
②	Stripped cable ends Red	For connection to the terminal block in the door station ("DC+")
③	Stripped cable end, black	For connection to the terminal block in the door station ("DC-")

Power supply unit for the monitor

①	Wall adapter	Connection for power supply
②	Round plug	For connection to the monitor

Power supply unit for the door station

①	Wall adapter	Connection for power supply
②	Round plug	For connection to round sockets

5. Installation
5.1 Installation the door station

To install the door station, please proceed as described in the following:
I.   Preparation
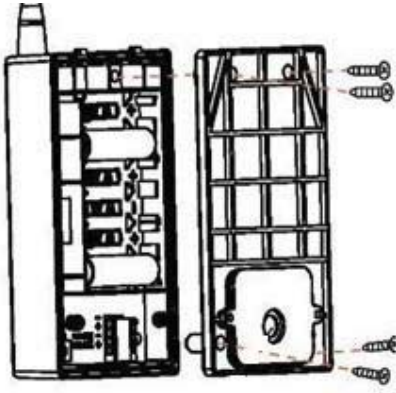
1.   Please remove the rear cover of the door station and insert 6 AA batteries. Make sure the polarity is correct.
2.   The LEDs will then light up in green for 5 seconds.
3.   The door station is now functional.

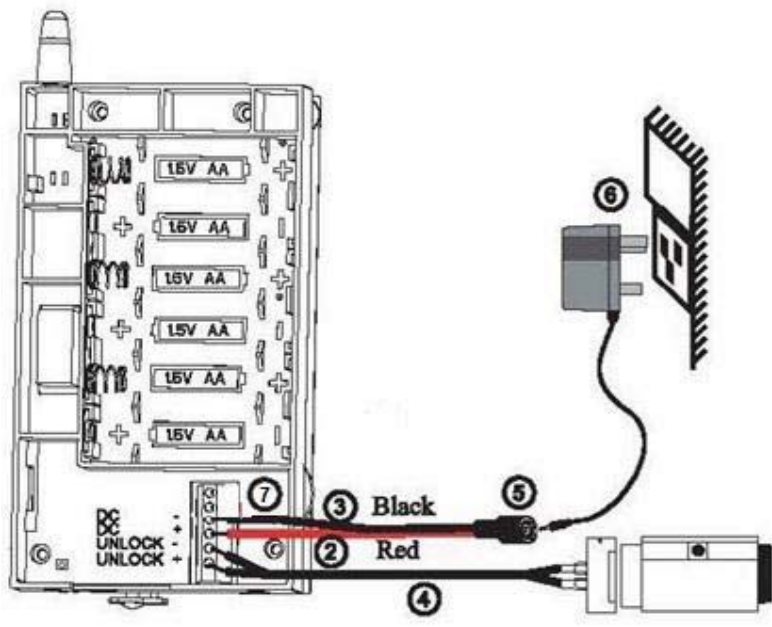| ⚠	**Important:** Weak batteries can cause the device to function incorrectly; please replace any depleted batteries.
⚠	**Important:** If you are in battery mode, please press the call button first to start operation of the door station.

II.   Connecting the door station

1. Remove the rear cover of the door station.
2. Attach the red cable for the round socket next to "DC+" in the terminal block.
3. The black connecting cable for the round socket must be attached to the terminal point "DC-".
4. The two connecting cables for the cable lug must be inserted next to "UNLOCK", with the terminals being provided for an existing 2-cable door opener connection.
5. A round plug with a power supply unit can now be connected to the round socket.
6. Turn on the power to the power supply unit.
7. A door bell can be connected to the two uppermost connector points.

⚠️ℹ️	**Important:** Please note that this contact is a potential-free relay contact, and a bell which lacks a power supply of its own can therefore not be connected.
⚠️ℹ️	**Important:** You also have the option of connecting your door opener directly to the door station, or to connect an existing door opening transformer using a relay.
⚠️	**Important:** Please note that only DC door openers can be actuated, with AC door openers not being able to be actuated.

More Information: www.abus.com → TVAC80020

5.2 Assembling the door station
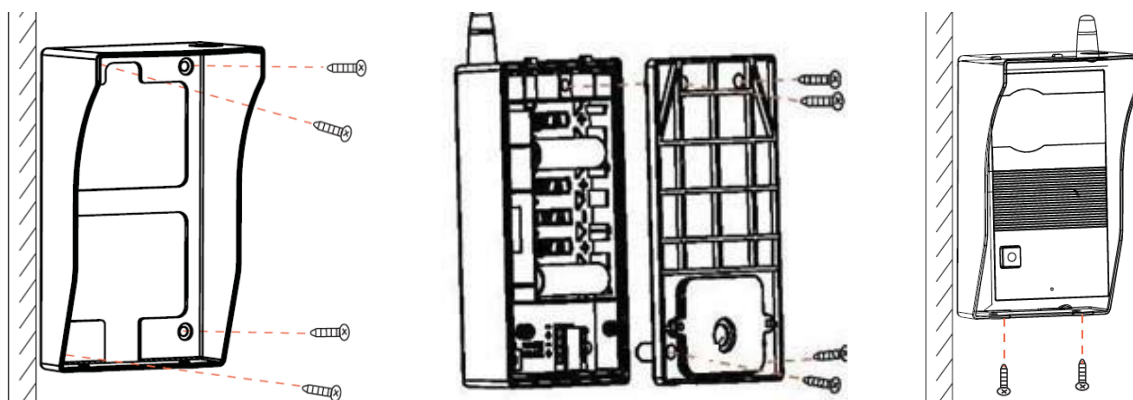
1. Use the door bracket to help you find a suitable place for installation. Use the drill holes to mark the surface, and drill the holes. Insert the wall plugs provided before attaching the bracket using the screws.

⚠️	**Important:** Before starting the installation, make sure than the wireless transmission range at the site of the required installation is sufficient.
⚠️	**Important:** Before replacing the cover of the device, connect the door station to the monitor.

2. Close the housing for the door station using the four screws provided.
3. Place the door station into its housing and attach it using the anti-theft screws provided. The matching screwdriver has been enclosed with the package.

5.3 Installing the monitor
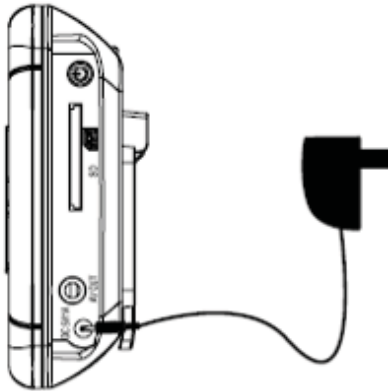
1. Connect the power supply unit to the monitor.
2. Switch the device on. To do so, press the power button.
3. You can now connect the monitor to the door station.
   To do so, please proceed as follows:
   When the menu item "Camera set up" appears on the monitor, select the sub-item "Pairing" and press the pairing button on the door station.

⚠	**Important:** Please note that if the monitor does NOT have an external power supply, it must be charged for at least 8 hours prior to being used for the first time. The batteries will provide power for approx. 3.5 hours.
⚠	**Important:** The integrated battery allows you to use the LCD monitor flexibly. If the battery LED lights up in red, then the batteries must be charged. Please note that the battery is always charged to a level which guarantees loss-free recording.

To display the monitor images on another display unit, please proceed as follows:
1. Connect the jack plug to the AV OUT connector on the monitor.
2. Then connect the RCA cable as shown in the drawing.
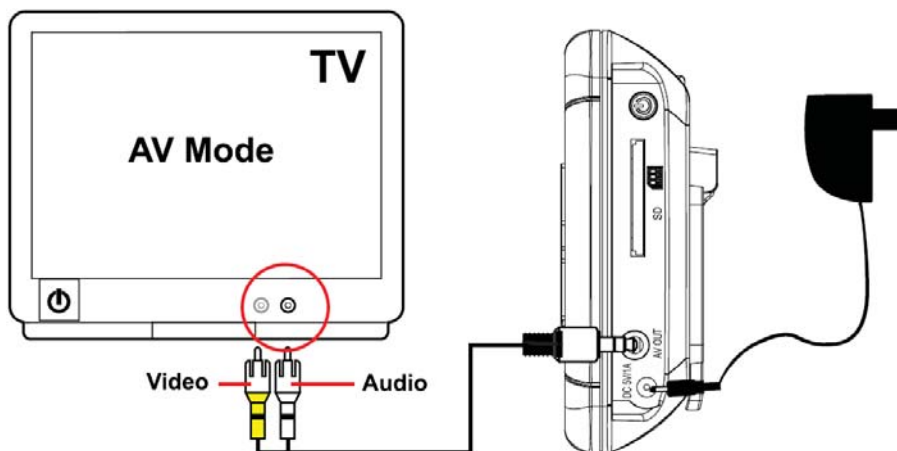
6. Operation

To switch the monitor ON / OFF, press and hold the power button for at least 2 seconds.

After each start, the monitor will switch to the live cast, selecting the last viewing settings.

If the 🆂🅳 symbol is displayed, then the SD card was identified correctly by the monitor and is functioning properly.

6.1 Live cast

📶	Signal display
📹	Display "Visitor is being recorded"
🏠🔋	Battery status display for door station Yellow: Battery charged Red: Battery low
●REC	Recording display: Flashes during recording
⊘	No SD card inserted
Full SD	SD card full
Err SD	SD card is not detected
🔒	SD card blocked
↻	SD card will be overwritten when memory is full
SD	SD card display
0.8G	SD card memory capacity
NO SIGNAL	No connection between the door station and monitor
📞	Speech function
01:12:45	Recording time
2011 05 01 14:30:11	Date / time display

6.2 Main menu

Press the MENU button to enter the main menu. You can navigate between the individual menu items using the arrow buttons.

⚠	**Important:** Please note: The symbols will be hidden automatically after being displayed for 10 seconds

You can choose between the following:

Camera settings:

Camera brightness
Pairing = add door stations

Recording settings:

Visiting record = visitor is being recorded
SD Card format = memory capacity on SD card
SD Card overwrite = SD card circular buffer

Event list:

The recordings are saved to sub-folders which are named with the date on which the recording was made.
The recordings are saved as individual files with the duration of the recording being used as the file name.

System settings:

Time setting = settings for date and time
Software version
TV format = TV output resolution
Factory default = restore factory settings

6.3 Camera settings

Camera brightness Camera Setup Camera Brightness OK	To change the camera brightness level, press the OK button which appears under the menu item "Camera brightness". A selection bar with settings from 0 to 9 appears. Settings can be changed using the ◄► buttons, and be confirmed by pressing the OK button.
Pairing = add door stations Camera Setup Pairing OK	The connection between the door station and the monitor is set up under the menu item "Pairing". To do so, press the OK button. The system will now search for the connection to the door station, with a round arrow appearing for 60 seconds. Press the PAIRING button on the door station for these 60 seconds. **When a connection is established, the monitor will switch to a live cast.**

6.4 Recording settings

Visiting Record = visitor is being recorded Recorder Setup Visiting Record Off ON OFF	Press the OK button to switch between ON and OFF. If you switch it to OFF, the visitor will <u>not</u> be recorded on the SD card when the bell is pressed.
SD Card Format = memory capacity on SD card Recorder Setup SD Card Format OK	This indicates the memory capacity which is available, and the free memory capacity, on the SD card.

SD Card Overwrite = SD card circular buffer	Use the ◄► buttons to activate the SD card circular buffer (ON) or to deactivate it (OFF). Confirm your selection by pressing the OK button. The circular buffer is activated by default. **Important: When the memory capacity is reached, the monitor will continue to record, and will delete the oldest recordings on the SD card.** **The SD card capacity display flashes 0.0 in red.**

6.5 Event list

Event List	Use the arrow buttons to navigate between folders. Press the OK button to select the required folder. Select the file with the required recording from the sub-folder and play it by pressing the OK button. Press the ▲ or ▼ buttons to fast forward or reverse at 2x / 4x / 8x / 16x normal speed. Please note that when a manual recording is made, the maximum duration of recording is 10 minutes. If this time is exceeded, a new file will be created.
Deleting files	Press the DEL button to enter delete mode. The current file or the current folder will flash on the display. Use the ◄► buttons to choose between all files or an individual file. Press the OK button to confirm your selection. Press ◎ to delete your selection. To cancel the deletion process, press ⊗.

⚠	**Important:** Your recordings are always made with sound, and it is therefore important to observe the stipulation on page 2 in order to avoid putting yourself, or other persons, in an unlawful situation. To change the volume during playback, please use the "Vol-" to turn the volume down or "Vol+" to increase the volume.

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6.6 System settings

Time setting = settings for date and time 0 9 0 1 0 1 0 0 0 1 Year Month Day Hours Minutes	Press the ► button to toggle between year/month/day/hour/minute. Use the ▲ ▼ buttons to adjust the values. Confirm your input by pressing the OK button.
Software version System Setup Software Version RX Ver: ―― TX1 Ver: ――	This indicates the version of the software being used by the door station and the monitor.
TV-format = TV output resolution System Setup TV Format NTSC	Use the ◄► buttons to select the preferred TV format. You can choose between NTSC and PAL. Confirm your selection by pressing the OK button. Please note that the format selected can affect the resolution.
Set to factory default = **Restore default parameters** System Setup Factory Default Start	Press the OK button to launch the factory settings. Confirm your selection by pressing ◎, and cancel the process by pressing ⊗. **Important:** **Please note that this procedure does not change the formatting of the SD card.**

7. Maintenance and cleaning
7.1 Maintenance

Examine the technical safety of the product regularly, e.g. check the housing for damage.

If it seems that it may no longer be possible to operate the device safety, stop using the product and protect it from unintentional use.

It is likely that safe operation is no longer possible in the event that:

- The device shows signs of visible damage.
- The device no longer works correctly

⚠	**Please note:** You do not need to perform any maintenance on this product. There are no components to service or anything inside the product to check. Never open it.

7.2 Cleaning

Clean the device with a clean, dry cloth. The cloth can be dampened with lukewarm water if the dirt on the monitor is hard to remove.

⚠	Do not allow any liquids to enter the device. Do not use any chemical cleaning agent, as they could damage the surface of the housing (discoloration).

8. Disposal

🗑	Devices displaying this symbol may not be disposed of with domestic waste. At the end of its service life, dispose of the product according to the applicable legal requirements. Please contact your dealer or dispose of the products at the local collection point for electronic waste.

9. Technical data

Model number	Door station	3.5" LCD monitor
Frequency	2.4 GHz	
Modulation	GFSK	
Transmission power	13dBm	
Sensitivity	-75dBm	
Wireless range	150 m*	
DC voltage supply	15V DC / 1.5 A	5V DC / 1 A
Power consumption	Max. 180mA	Max. 650mA
Battery type	6 x AA 1.5 V lithium batteries	Li-Ion polymer battery, 3.7 V / 1,800 mA
Transmission channels	1	1
Viewing angle	85° (H) / 65° (V)	--
Lens	1.8 mm	
Resolution	640 x 480 pixels (VGA)	
Number of IR LEDs	9 x IR LED	--
Image sensor	1/4" CMOS	--
Range of night vision function	0.8 m	--
Video signal	--	1.0 V p-p, 75 Ohm
Audio signal	--	1.0 V p-p, 600 Ohm
Outputs	Door opener: 12 V	3.5 mm jack (video)
Storage medium	--	SD card, max. 32 GB
IP protection class	IP 55	--
Rechargeable battery running time	Max. 6 hours	Max. 4 hours
Dimensions	(WxHxD): 85 x 169 x 36 mm	(WxHxD): 133 x 87 x 27 mm
Net weight	0.205 kg	0.2 kg
Max. operating temperature	-10 °C - 40 °C	-10 °C - 40 °C

* The wireless transmission range depends on the environmental factors (e.g. mobile communication masts, high-tension pylons, electrical wires, ceilings and walls, etc.).
If conditions are not favorable, the range will be limited.